IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-8. (Canceled)

9. (Currently Amended) A ~~manufacture~~ method of manufacturing a glass substrate for an information recording medium, comprising the steps of:

immersing the glass substrate in a heated chemical reinforcing treatment liquid, and subjecting an ion on a glass substrate surface layer to ion exchange with an ion in the chemical reinforcing treatment liquid to chemically reinforce the glass substrate; and

treating the surface of the glass substrate drawn up from the chemical reinforcing treatment liquid with a treatment liquid containing silicofluoric acid to control an offset bearing area value to a desired value.

10. (Currently Amended) A ~~manufacture~~ method of manufacturing a glass substrate for an information recording medium, ~~provided with~~ comprising the steps of:

polishing a glass substrate surface; and

immersing the glass substrate in a heated chemical reinforcing treatment liquid, and subjecting an ion of a glass substrate surface layer to ion exchange with an ion in the chemical reinforcing treatment liquid to chemically reinforce the glass substrate,

said method further comprising the steps of:

controlling the glass substrate surface by a chemical treatment to provide a desired surface roughness before the chemical reinforcing step; and

treating the surface of the glass substrate drawn up from said chemical reinforcing treatment liquid with a treatment liquid containing silicofluoric acid to control an offset bearing area value to a desired value.

11. (Currently Amended) The ~~manufacture~~ method of manufacturing the glass substrate for the information recording medium according to claim 10 wherein ~~said~~ chemical treatment performed before the step of chemically reinforcing the glass substrate comprises treatment with the treatment liquid containing at least one acid selected from the group consisting of sulfuric acid, phosphoric acid, nitric acid, hydrofluoric acid, and silicofluoric acid, or alkali.

12. (Currently Amended) The ~~manufacture~~ method of manufacturing the glass substrate for the information recording medium according to any one of claims 9 to 11 wherein a concentration of said silicofluoric acid is in a range of 0.01 to 10 wt %.

13. (Currently Amended) A ~~manufacture~~ method of manufacturing an information recording medium, comprising the steps of forming at least a recording layer on the surface of the information recording medium glass substrate obtained by claims 9 to 12.

14. (Original) A management technique of a friction coefficient based on a surface roughness in an information recording medium surface having a surface roughness of Rmax 15 nm or less, comprising steps of:

when repeated measurement of a bearing curve is performed by an atomic force microscope (AFM), obtaining a bearing area value at which a measured value of a bearing height rapidly starts to scatter in the vicinity of a maximum protrusion height (BA=0%), and obtaining

the bearing height (real peak height) corresponding to the bearing area value from the bearing curve;

checking a correlation of a bearing area in a predetermined depth from said real peak height with the friction coefficient based on the surface roughness by changing said predetermined depth; from said correlation, with respect to a change amount of the friction coefficient, obtaining a predetermined depth (predetermined slice level) at which the corresponding change amount of the bearing area increases; and

using the bearing area value (offset bearing area value) in said predetermined slice level to manage the friction coefficient based on the surface roughness.

15. (Original) A management technique of a friction coefficient based on a surface roughness in an information recording medium having a surface roughness of Rmax 15 nm or less on a medium surface, comprising steps of:

using a bearing area in a depth of 0.5 to 7 nm (slice level) from a maximum height (Rmax) by AFM measurement to manage the friction coefficient based on the surface roughness.

16. (Original) A management technique of a friction coefficient based on a surface roughness in an information recording medium having a surface roughness of Rmax 15 nm or less on a medium surface, comprising steps of:

using a bearing area when a depth corresponds to 20 to 40% of Rmax from a maximum height (Rmax) by AFM measurement is set as a slice level, and managing the friction coefficient based on the surface roughness.

17. (Currently Amended) ~~An information recording medium manufacture~~ A method for

manufacturing an information recording medium having a desired medium surface based on the management technique of the friction coefficient based on the surface roughness according to claims 14 to 16.

18. (Currently Amended) A ~~manufacture~~ method of manufacturing an information recording medium substrate for reflecting an information recording medium substrate surface in an information recording medium surface to obtain a desired medium surface, said method comprising the steps of manufacturing the information recording medium substrate having a desired substrate surface based on the management technique of the friction coefficient based on the surface roughness according to claims 14 to 16.

19. (Original) A management technique of a surface state of an information recording medium substrate surface having a surface roughness of Rmax 15 nm or less, said technique comprising steps of:

when repeated measurement of a bearing curve is performed by an atomic force microscope (AFM), obtaining a bearing area value at which a measured value of a bearing height rapidly starts to scatter in the vicinity of a maximum protrusion height (BA=0%); and

utilizing various AFM measured values excluding data from BA=0% to the bearing area value at which the bearing height measured value rapidly starts to scatter.

20. (Currently Amended) ~~An information recording medium substrate manufacture~~ A method for manufacturing an information recording medium substrate having a desired substrate surface based on the surface state management technique of claim 19.

21. (Original) A management technique of a surface state of an information recording medium surface having a surface roughness of Rmax 15 nm or less, said technique comprising steps of:

when repeated measurement of a bearing curve is performed by an atomic force microscope (AFM), obtaining a bearing area value at which a measured value of a bearing height rapidly starts to scatter in the vicinity of a maximum protrusion height (BA=0%); and

utilizing various AFM measured values excluding data from BA=0% to the bearing area value at which the bearing height measured value rapidly starts to scatter.

22. (Currently Amended) ~~An information recording medium manufacture~~ A method for manufacturing an information recording medium having a desired medium surface based on the surface state management technique of claim 21.

23. (New) The manufacturing method according to claim 9, wherein the surface of the substrate is treated with the treatment liquid containing silicofluoric acid so that a bearing area value (offset bearing area value) in a depth of 0.5 to 5 nm (predetermined slice level) from a bearing height (real peak height) corresponding to the bearing area value of 0.2% to 1.0% is 90% or less.

24. (New) The manufacturing method according to claim 9, wherein the surface of the substrate is treated with the treatment liquid containing silicofluoric acid so that when a depth corresponds to 20 to 45% of Rmax from a bearing height (real peak height) corresponding to a

bearing area value of 0.2% to 1.0% is set as a slice level, the bearing area value (offset bearing area value) is 90% or less.

25. (New) The manufacturing method according to claim 10, wherein the surface of the substrate is treated with the treatment liquid containing silicofluoric acid so that a bearing area value (offset bearing area value) in a depth of 0.5 to 5 nm (predetermined slice level) from a bearing height (real peak height) corresponding to the bearing area value of 0.2% to 1.0% is 90% or less.

26. (New) The manufacturing method according to claim 10, wherein the surface of the substrate is treated with the treatment liquid containing silicofluoric acid so that when a depth corresponds to 20 to 45% of Rmax from a bearing height (real peak height) corresponding to a bearing area value of 0.2% to 1.0% is set as a slice level, the bearing area value (offset bearing area value) is 90% or less.

27. (New) The management technique according to claim 14, wherein the bearing area value at which the measured value of the bearing height rapidly starts to scatter is 0.2 to 1.0%.

28. (New) The management technique according to claim 19, wherein the bearing area value at which the measured value of the bearing height rapidly starts to scatter is 0.2 to 1.0%.

29. (New) The management technique according to claim 21, wherein the bearing area value at which the measured value of the bearing height rapidly starts to scatter is 0.2 to 1.0%.